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ABSTRACT

This paper, part of a larger study of new television technologies, examines how preschool children integrate remote control devices (RCDs) into their television viewing behavior, preschoolers' competence with and knowledge of RCDs, and the role of the RCD in shaping family viewing styles. Subjects, 50 children aged 4 to 6 years attending 3 preschools in a small midwestern city, were interviewed at school concerning their knowledge and use of RCDs. Extensive in-home observations and in-depth interviews with parents and a target preschool child in each of three families complemented the data obtained through the interviews. Results indicated that: (1) preschoolers have ready access to RCDs in their homes and are active users of the device; (2) if they have access to the devices, even young children will learn the device's basic functions; (3) the RCD is considered by parents to be a non-threatening tool; (4) preschoolers use the RCD keypad in very basic ways to control the television; (5) preschoolers' RCD use patterns are related to, but not a direct imitation of, their parents' RCD use; (6) children play an important role in shaping family viewing styles and practices, just as parents play an important role in shaping children's viewing; and (7) once the children disappear from the viewing environment, a viewing style characterized by much higher levels of "grazing" behaviors was evident. Findings suggest that family viewing styles have been influenced by the introduction of the RCD, but that each family integrates the device somewhat differently into their family viewing. (Contains 20 references.) (RS)

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"O.K. Where's the Remote?"
Children, Families, and Remote Control Devices

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"O.K. Where's the Remote?"
Children, Families and Remote Control Devices

A recent article in the popular press noted that the remote control device (RCD) has become "the most avidly used and fought over device in the electronic cottage" (Arrington, 1992, p. 10). Audience use of the RCD has been referred to as "grazing" (Gilbert, 1989), a constellation of behaviors that has stimulated considerable interest among academics. However, academic research has tended to focus primarily on the impact of the device in terms of industry concerns -- that is, how can programmers and advertisers develop strategies to counter RCD use -- rather than examining changes in the viewing experience for the audience. This strong industry orientation was established in the early research on RCD use with studies of user profiles (Heeter & Greenberg, 1985) and reports of channel-changing patterns (Yorke & Kitchen, 1985) and is evident even in more recent research, including the most detailed examination of RCD use to date, the Channels study which appeared in 1989. In this collection of articles, topics focused primarily on advertising and programming ramifications of the RCD (Ainslie, 1989; Bollier, 1989; Brown, 1989; Snyder, 1989b) and programming strategies for responding to RCD use (Selnow, 1989).

Research examining the significance of the RCD for the viewer has been much less evident in the literature. Examples include Morley's study (1986) of RCD use by male and female family members in Great Britain, Snyder's report (1989a) of viewer anecdotes about the RCD-mediated viewing experience, Walker and Bellamy's work (1991a; 1991b; Bellamy & Walker, 1990) applying uses and gratifications to the study of RCD use, and Copeland's (1989) examination of RCD-induced changes in family viewing patterns. With the exception of Morley's work, all of the RCD data compiled thus far have been collected using survey instruments which rely on self-reporting techniques. Even Morley's study was based on what family members "said" about television and RCD use rather than what they "did" with the technology.

In addition to the heavy reliance on self-report data, research-to-date has also adopted an exclusive interest in adult audience members. Some evidence regarding other audience members emerged from studies by Heeter and Greenberg (1985; 1988) who examined RCD use among preadolescents and adolescents as part of larger studies; however, even in these studies, children's perceptions and reports

remained incidental rather than central. Researchers have neglected RCD interactions experienced by children within the family viewing environment. Virtually no work has examined the processes by which children have learned to use and understand the RCD.

The present study responds to these two limitations of previous research -- the exclusive reliance on individuals' accounts of their RCD use and the focus on adult members of the audience. It does so by adopting a multiple methods approach (Webb, Campbell, Schwartz, Sechrest, & Grove, 1981), combining survey interview, observational, and depth interview methods and by making children the primary focus of the study. Because "TV viewing does not occur in a vacuum: it is always to some degree background to a complex behavior pattern in the home" (Bechtel, Achelpohl & Akers, 1972, pg. 299), media use is always influenced by ongoing and dynamic relationships that exist between and among individuals in particular contexts. The complex influence of the family viewing environment challenges researchers not to isolate and examine self-reports of RCD activities but to supplement these findings with direct observations of behaviors within their naturalistic context in order to understand them more fully.

Qualitative studies have been found to enhance our understanding of the complex interrelationships at work in the home when the integration of other televisual technologies (the videocassette recorder) has been examined (see, for example, Lindlof, Shatzer & Wilkinson, 1988; Lull, 1990; Rice & Sell, 1990.) The shortcomings of such approaches are that the specificity and particularity of qualitative methods make it difficult to leap to any general conclusions about the phenomenon being studied. However, combining multiple research approaches can yield what Eisner calls "structural corroboration" (1991, p. 110). As he observed, "when multiple types of data are related to each other to support or contradict the interpretation or evaluation" of a phenomenon, the confluence of evidence "breeds credibility." In his extensive work in this area, Lull (1990) has proposed the combination of personal observation and depth interviews as complementary approaches which provide a fuller understanding of individuals' behavioral patterns. This combination of methods permits the researcher to observe behaviors within the naturalistic setting -- the home -- and to compare the observations with the explanations and interpretations provided by the interviews. We contend that such combinations of

approaches will yield a fuller and richer explanation of RCD use.

Research Questions

The present report, part of a larger study of new television technologies (VCRs and RCDs) on preschoolers' television use, focuses specifically on the RCD and adopts a multiple methods approach to address the following research questions:

1. How do preschool children integrate the RCD into their viewing behavior (what access do they have to it; how do they use it; to what extent do parental rules control their use of it)?

2. A second question addresses to preschoolers' competence with and knowledge about the RCD, (how competent are they in using the RCD; how have they learned to use it; how well do they understand the capabilities of the RCD).

3. The third question refers to the family's response to the RCD in terms of its role in shaping family viewing styles; that is, what role does the RCD play in shaping family viewing styles?

In order to answer these questions, we designed a study combining research approaches. Our purpose was to acquire responses to the first set of general questions regarding preschoolers and RCDs in the home primarily from a general survey interview, and then to use in-home observations and depth interviews to explain and embellish the survey results, as well as to provide insight into the questions related to competence, knowledge, training/parental support, and family viewing styles. The two-stage investigation consisted of survey interviews with 50 preschool children followed by extensive in-home observations and depth interviews with parents and a target preschool child in each of three families.

Method

The two stages of the research will be discussed separately. We will first present the procedures we followed in conducting the preschool survey. We will then turn to a discussion of the procedures used in the in-home observation and depth interview components of the study.

Preschool Survey

We contacted local preschools and asked for permission to come in and talk with children ages four to six. Three preschools, representing a cross-section of the community -- a small Midwestern city of about 50,000 -- provided access to their facilities. At the preschools, each child participating in the study was invited into a room away from the distractions and activities of others to talk with one of the interviewers.

We showed the children an RCD and asked them whether they had one at home, whether they used it, how much they knew about what it did, what they used it for, and what kinds of parental rules controlled their use of it at home.

Our questions were asked in an open-ended fashion; our pre-tests of the interviews with preschoolers indicated that children were able to answer the questions if we drew them into a conversation about the topics of interest, rather than tried to conduct a rigidly structured interview. Thus, the interviews were casual and discursive but covered all of the topics with each child. The entire interview lasted approximately 20 minutes per child.

In-Home Observations

The second part of the study involved observing children in a naturalistic setting, their home, to address the second and third research questions. In order to qualify for the study, each family was required to have at least one child between the ages of three and six, the target age group, and own a working television set connected to a VCR and RCD. The three families that agreed to participate ranged from lower-middle to upper-middle income, all were white, and all had two parents present in the home with both parents working at least part-time outside the home. The three mothers were all in careers related in some way to education -- one taught preschool, one taught kindergarten, and one was a librarian. Two of the families had two children present; the third family had four children.

For the in-home observations, one researcher was assigned to each family for the duration of the study. The three families were visited five or six times over the course of one month for a minimum of three hours per visit. The total number of hours spent with each family ranged from 15 to 26, depending upon the family's availability. Because all of the children were involved in at least part-time daycare, possible observation times were somewhat limited, and we worked with the families to accommodate their routines and plans. We scheduled observations to include a variety of times and days; we assumed that their viewing behaviors would, at least in part, be shaped by the programming options available at any one point in time. Thus, in each household, we observed the target child's viewing at least once during each of the following time periods: late afternoon (3-6 p.m.), early evening (6 to 9 p.m.), and Saturday morning.

Researchers were instructed to focus their observations on the target child within each home, though other household members and their activities during the observation period were recorded as well. The first visit was designed to allow the observer to begin to develop a relationship with the family and the target child. During this visit, the observer watched television with the child and talked with the parents. On the second visit, the researcher and child viewed and discussed one of the child's favorite videotapes.

Early in the observations, the researcher conducted depth interviews with the child and with each of the parents individually. The interview with the child addressed questions similar to those in the preschool survey but used more probes and follow-up questions in an unstructured, open-ended style. The interview with the parents covered such areas as how program selection was determined in the home, parental concerns about their children's television and video use, the level of support and instruction they provided the target child for RCD, VCR, and television use, rules about television, RCD, and VCR use, and a description of viewing styles of the family members. On the last visit at the end of the observation period, the parents were interviewed together. The final interview encompassed discussion about and clarification of behaviors and details that emerged from the in-home observations.

Results

Preschool Survey

The sample of preschoolers interviewed (N=50) included slightly more girls than boys, ranging in age from four to six. In terms of direct access to the RCD, 88% of the children said they had RCDs in their homes. This percentage is quite close to Arrington's recent national estimate of 85% (1992). In addition, we asked the children who used the RCD in their home and whether they were permitted direct access to it. Fifty-two percent of the children said that they used the RCD themselves. In addition, they reported that 74% of their mothers and 76% of their fathers used the RCD.

None of the children mentioned any specific rules related to RCD use. In addition, only three of them reported that they were "not allowed to touch" the VCR. The children indicated that their parents had rules regarding both the amount of viewing (60%) and the content of programming (50%). Yet, when asked to articulate these rules, 30% could not identify specific rules related to the amount of viewing and

22% could not identify the content rules of their household. Of those who could articulate rules, the most notable response was that parents often prohibit "scary" content. Despite considerable changes in the viewing environment since the introduction of VCRs and RCDs to the home viewing environment, parental rules regarding television have not changed much since the 1970s (for review, see Dorr, 1986).

We also asked the preschoolers about their understanding of the uses of the RCD. When asked to explain what the RCD does, 16% said they did not know. The two most frequent answers were that it "changes channels" (mentioned by 60%) and that it "turns the TV on and off" (54%). Comparisons of boys' and girls' responses resulted in no differences in terms of understanding the functions of the RCD, though 21% of the girls said they didn't know what the RCD did, compared to 10% of the boys. In addition, no clear differences emerged in relation to the child's age; that is, responses regarding the functions of the RCD from four-year-olds were similar to those given by five- and six-year-olds.

In-Home Observations and Depth Interviews

We now turn to consideration of the results of the in-home observations and depth interviews with the parents and the target children in these homes. In this part of the study we were particularly interested in the processes related to RCD use -- how do young children develop competence with the technology, what do they know about the technology and how have they learned it, and how has the RCD shaped family viewing styles?

The Smith Family. Michael and Janet live with their two children, Carie (age 4 1/2) and Ben (age 2 1/2), in a small city that is home to a large midwestern university. Both Janet and Michael hold master's degrees and work full-time outside of the home, with Janet working as a librarian and Michael as a media specialist.

The family room is the center of activity within the home. The TV is located in one corner, on top of a modular unit that houses the VCR and the family videotape library, consisting of about 30 children's videos. In front of the television set, is a small play table, where the children eat their meals, watch television, and do art and other activities. Their media center is serviced by three RCDs: one for the TV, another for the VCR, and the third for the satellite antenna. The nature of the relatively complex

configuration has resulted in a system that is characterized by a high level of parental control over both selecting and accessing content. Rigid and strict rules govern access to the technologies. The general rule is that the children are not permitted to touch the components of the system.

Both children are enrolled in full-time preschool programs. Parents and children return home in the late afternoon, and the children dominate television viewing from 5:30 to 8:30 p.m. Though the parents frequently share in and interact with their children while they view, the content selections during this time are designed to serve the children. Bedtime preparation takes approximately an hour more, which leaves little time for adult viewing in the evenings.

During the observations, typical viewing was characterized by the mother giving Carie and Ben a list of three or four choices from their video library; each child would select one of the choices offered. After selections were made, one of the parents, usually the mother, would insert the videotape and start it for them. Even matters such as controlling the volume or changing channels were typically handled by the parents, again, usually the mother. Consequently, Carie and Ben had little opportunity to interact independently with any of the televisual technologies in their home. During the course of the observations, the children never attempted to manipulate any of the components -- RCDs, VCR, or television. As a result, their knowledge and competence with the RCD and the VCR are minimal. Carie understands that the RCD is used to manipulate the VCR but has little practical experience with the hardware.

During the interview with Carie, the observer noted, "I started off by asking her if she could tell me the name of the remote control device. She called it a 'clicker' but went on to say that it 'starts movies' and 'turns them up and down.' Her connection of the remote with videotapes reflects the minimal use of television programming in this home." During the course of the observations, the children watched only one broadcast/cable program -- Inspector Gadget -- on a Saturday morning. All other viewing (and all other viewing choices presented by the mother) consisted of children's videos. Because Janet and Michael are always involved with the children's viewing activities and are available for assistance, neither child showed concern or frustration about their lack of expertise. As Carie observed at one point during the interview and after trying to insert a tape backwards, "I don't use it [the VCR] alone, so I don't need help."

Both parents, but mostly Janet, work actively to engage their children's interest in the selected content, for example, asking questions, directing their attention to the screen, watching and reacting along with the children. They teach their children to be active, engaged viewers. In addition, both parents are advocates of prosocial and educational messages within the media content consumed by their children. They have firm ideas of appropriate content, which must meet Janet's strict criteria. As Michael observed, "[W]e can't control what they view at their friends' homes, but we feel it is easier to maintain control here at home than it is to retrieve it once it has been relinquished."

Once Carie and Ben are in bed, Michael and Janet are free to watch their preferred content, and a different viewing style dominates. Michael enjoys cable programming, especially historical documentaries and miniseries. Janet disdains most TV content, saying, "I can't believe there are 35 channels and still nothing to watch most of the time. I wouldn't walk across the street to watch most network programming." Even when Janet does watch television, it is more of a background activity to accompany looking at catalogs or eating.

Janet and Michael may be infrequent users of television, but they enjoy the benefits of the RCD. Michael enjoys the ability to scan through the channels or to fast-forward through commercials on previously recorded programming. Janet, though more of a purposeful user of the RCD who plans what she is going to watch, finds that she is now more likely to change to another channel at the end of a program rather than watching whatever comes on next. She explained that she would previously "lock-in" to a certain station and stay there for the duration of her viewing time. Neither parent voiced concerns about the presence of the RCD in their home, compared to their considerable concerns about television content.

The rules in this home are unspoken. As the observer recorded in her field notes:

> "...Carie told me that her parents had no rules regarding how much television she could watch and, as for content, she noted that 'they sometimes tell me things are too scary for me.' My observations supported this view though I think it necessary to point out that the rules in this house appear to be the 'unspoken' sort. Considering the amount of control the parents exert over the viewing situation, there really is no need for them to articulate rules to the children."

Both Michael and Janet have strong opinions about the potential effects of television. Michael feels

that one important function of television is to introduce children to a wide variety of cultural information. He finds this opportunity often missed by standard network fare. Janet worries about programming that may be inappropriate -- too scary or too violent -- for her children. For this reason, they carefully screen what their children watch. As a further check, the home's complex televisual configuration serves as an additional barrier to the children's exposure to possible harmful content.

The children's viewing styles reflect both their parents' view of television, and to some extent, their parents' viewing styles. The vast majority of their viewing time is filled with videotapes, which their parents feel afford greater control over content than network or cable programming. Videos tend to emphasize the type of positive messages and lighthearted music and songs which Janet and Michael feel are appropriate for preschool children. Because control over the content is retained by the parents during viewing (for example, starting the tape, stopping it, rewinding it, adjusting the volume, all performed with the RCD), the children never skip over parts of a tape; they tended to watch each tape sequentially. Carie explained how her mother would help them watch favorite parts, "we sometimes go back and replay favorite parts but we don't skip anything."

In addition, Carie's viewing style mimics that of her mother. Like her mother, who consults the program guide before turning the set on, Carie watches pre-selected content from a listing of choices recited by her mother. And like her mother, she watches it from beginning to end without changing channels, fast-forwarding through content, and so on. A final similarity in viewing style was Carie's tendency to use the television as background noise, as Janet did. The observer noted, "During my observations, Carie and Ben ate dinner, played with toys, read books, and talked with each other or their parents while viewing videos. Only during one visit did the hcildren actually sit attentively and watch a videotape."

An interesting characteristic of viewing styles in this home was the strict segregation of child and adult program content. The viewing styles and content change dramatically in the home after the children go to bed. As long as the children are up, television content caters to their interests and is tightly controlled by the parents, in particular by the mother, not only to insure that no offensive materials appear but also to

insure that positive content products do appear. With the children tucked in their beds, more mainstream content is likely to appear (though both parents deny watching much commercial television), and more grazing behaviors emerge as well. The actual style of viewing changes when the children are not present.

The Jones Family. An upper-middle-class suburban Midwestern community has been home to Jenny and Tom for about a year. This most recent move followed a series of job relocations to Michigan, New York and Connecticut. Both Jenny and Tom possess college degrees and work outside of the home, Jenny, part-time, as a nursery school administrator and teacher and Tom, full-time, as an engineer for a public utility.

Their four children, Sally (14), Jeff (12), Erin (7) and Jimmy (3) enjoy free access to a variety of viewing situations and options. The family has four color television sets located at different viewing sites: living room, family room, the oldest daughter's bedroom and the parents' bedroom. The main viewing area is in the family room, adjacent to the kitchen. The family does not subscribe to cable service. VCRs are connected to the TV in the family room and in Sally's bedroom. Both of these viewing sites are equipped with RCDs. Parental control over viewing content and quantity is minimal, and conflicts over program preferences are resolved by moving to another viewing site. Despite this practice, the family tends to view as a group in the family room, where all the furniture is arranged to permit an unobstructed view of the set.

This family, more than any other in the study, watched television and videos avidly and clearly enjoyed doing so. Jenny expressed some concerns about the quality of television content, and she is clearly the party who is responsible for monitoring and rule-making around television viewing, but any constraints on interaction with the medium or its add-on technologies are strictly temporary and limited in extent. For example, the observer noted, "When I asked about rules for television, Jimmy said that sometimes they have rules. He called it their 'summer rule,' when he can watch only his favorite shows. He was referring to a set of rules that his mother would later relate to me in which she had limited the children to one hour of programming during the day due to 'overusage of TV.'" In this family, rules around television were transient and context-dependent, the only rule that existed in relation to the RCD was related to

positioning. Both parents expressed the rule that the RCD was supposed to be returned to the end table nearest to the television set, though both parents laughingly conceded that the usual position for the RCD was "lost."

Parental enjoyment of the medium has resulted in a rich media environment, providing the children with ready access to VCRs, RCDs and a Nintendo game system. During the family dinner hour, the entire family routinely watched and discussed a program as a group. The parents consider group viewing as serving a healthy, integrating function in their family; it keeps them talking to each other -- parents, teenagers, preschoolers -- around a common subject.

High parental engagement in television has contributed to the acceptance of RCD technology in this home. The device is perceived as a benign extension of the television. Its use facilitates what is already an avid interest in content. Tom and Jenny's acceptance and enjoyment of the RCD have affected the willingness with which their children have engaged the device.

In the Jones Family, Jenny said that channel-changing was the biggest change that she and Tom had noticed in relation to the RCD. She described sampling TV on several different channels and described her husband, Tom, as being particularly active during sports programming. Tom contended that he was more likely than Jenny to be channel-loyal, having more of a tendency to "go with the flow" of TV, though he acknowledged being an active channel-changer.

Tom favors changing during a program's course, a practice made easier during sports broadcasts which are structured with time-outs and penalty decisions which lend themselves to grazing behavior. Jenny favors using commercials as a grazing opportunity. Jenny related that following the action on more than one program at once is easy with content with which she is familiar, e.g. old movies, "in order to watch the good parts," a practice that Tom denies being capable of accomplishing.

Jenny related that she has been an active channel-changer since childhood, when she would sit right on top of the set and twist the tuner from station to station. She acknowledged that the RCD had only made easier what has been a lifelong viewing pattern. Another area made easier is volume control. In the past when the children got so loud as to drown out the TV, both parents said that they would have to yell at

the kids to pipe down. Now, they can maintain their seats and raise the TV's volume from a distance. The children, upon hearing the TV-generated reprimand, usually diminish their noise level without words ever having been spoken.

Finally, in this home the parents noted that the introduction of the RCD into their home, has been accompanied by the almost daily hunt for the "lost" remote. As Tom remarked, "It is usually in the couch cushions or just plain lost [rather than positioned on the end table closest to the TV]." But in spite of the recurring problem of locating the device, both Tom and Jenny have no urge to go back to pre-RCD living. They like their RCD.

Though Jenny assists Jimmy, the target child, in many of the same ways observed in the Smith Family, including tape set-up and encouraging active, engaged viewing (again a job her spouse does not feel compelled to perform), there is no attempt to segregate his content from the rest of family content. At times, Tom and Jenny each encourage their children to join them for viewing their favorite content, Macgyver for dad and Star Trek: The Next Generation and afternoon soaps for mom. Jenny acknowledges that the older children, Sally and Jeff, are soaps addicts already, with Sally time-delay taping her favorite program on a daily basis. In spite of the sheer volume of viewing that does take place, it was common for members of the family to read while viewing, except for Jimmy who lacks the reading skills at this point.

Though Jenny and Tom did not intentionally set out to train their children in its manipulation, the sheer volume of opportunities to employ the RCD has led their children to master its functions. Older siblings demonstrated complete mastery of RCD functions and operated the device routinely in the home. The combination of the mother's support and assistance, as well as sibling support, in helping the target child with the RCD provides explicit encouragement of the younger child's facility.

Even at three years of age, Jimmy has mastered the basics of RCD use. Though he has some difficulty articulating its functions verbally, observations demonstrated he has a clear understanding of the device. The observer noted,

"He appeared to understand the uses of television technologies, such as the remote control device, the

> VCR and the home video game system. He was neither intimidated by, or unfamiliar with, either their form or function. He could identify both the components and knew how to make them work. His responses to my questions were simplistic in nature, but, later in the observations, it became clear that he possessed the mechanical skills necessary for manipulation."

He primarily uses the RCD to change channels on the TV, in order to watch his favorite programs. He must ask for assistance with channel numbers, because he does not yet recognize numbers. He must also ask for time-telling assistance, but when received, he knows if his program should be airing. Any advice sought was specific and limited, and the actual manipulation of the technology was done by Jimmy, not by siblings or parents. One example from the observations illustrates this pattern:

> Jeff and Erin (the older siblings) came into the family room and sat and listened to our conversation. They turned on the television set and Jimmy brought the remote control to his mother for assistance. He wanted to know the station number to press in order to get his program. Jenny had to ask Jeff what channel The Teenage Mutant Ninja Turtles was on and he replied "59." Jimmy then successfully manipulated the remote to the proper channel."

At times, the manner of his interaction with the RCD appeared almost play-like, testing and experimenting to see what it could do. Though no grazing behavior was observed, there were times when he would "accidentally" locate children's content through a mistake in channel entry on the RCD pad. Play behavior and lucky content finds would seem to lend themselves to exploring such behavior. The fact that Jenny and Tom graze, with Jenny being adept at following more than one program at a time, may contribute to Jimmy's future use of the RCD. For now, Jimmy shows interest in preselected content, and in watching shows from beginning to end rather than grazing. Despite being encouraged to fast-forward through a tape to his favorite part, he declined on numerous occasions. His fascination with the content was complete, and he watched it all.

The Roberts Family. Mary and Mike are both natives of Arkansas. They both have advanced degrees--Mary has a master's degree in early education, and Mike is a graduate student. Mary works full-time as a kindergarten teacher. They have two children, Jan, the target child, who is four years old, and Tim, who is two. The remote control device plays a significant role in the family's televiewing activities.

The family has one television set which is located in the living room. It is an older model color console and is the focal point of the room. The family subscribes to basic cable service, as well as The

Disney Channel. Connected to the television is a VCR equipped with an RCD. Because this is the only RCD, the VCR is on constantly to enable the family to conveniently switch channels, as well as control the VCR.

Mike and Mary pride themselves on having created a "close and connected" family which they feel will remain unaffected by television. Though Mary has some reservations about television's potential for negative effects, she feels rule-making is impossible since the TV set is on all the time when her husband is home. It is Mary who attempts to control the content her children view. Mary wishes that the television was not such a presence in her home but feels that there is little she can do because Mike enjoys viewing so much.

The only rule that emerged around the RCD concerned the time-delay programming buttons. Jan was told she was not allowed to use these buttons. The family had an extensive repertoire of time-delay programming, for example, programs they want to watch but which air when they are putting the children to bed. They feared that Jan might inadvertently make changes in the programmed recordings and, therefore, prohibited touching those parts of the RCD. Regular taping included one of Jan's favorite shows that aired while she was at school. In addition, Jan regularly inserted a tape and recorded one program, while watching another, after she got home from school. Thus, it became apparent that it was not taping functions that were restricted but rather any potential situations which might disturb pre-set programming.

The children's RCD use can be understood through the way the parents use the technology. The parents' use of television, the RCD, and the VCR in the home greatly affects the rules about the children's access to and their level of competence with the RCD and the VCR. Mike watches television much more than Mary or the children. Because of his viewing style, television is turned on whenever he is in the room. It is Mike who controls the RCD most often in the home. He refers to it as his "third arm." When in the room, the RCD is never far from his side. All members of the family report that the device is always on the table next to his place on the couch when he is viewing.

Mike insisted this practice is not a "power thing," but rather a reflection of the different ways in which

he and his wife grew up in regard to television. He described his superior viewing skills, e.g. knowing the channel numbers; adopting an attentive, critical viewing style; possessing more extensive experience in relation to television; and focusing on the television rather than on household chores as Mary does while viewing, as justification for both his program choice authority and his television viewing style.

Mike admitted that he watches television in a variety of ways, grazing through the channels, viewing several programs at once, unless it is a program in which he is particularly interested. He also uses it to zip through commercials and uninteresting content on pre-recorded material. Despite his propensity for grazing, this behavior does not occur often because he claims the kids usually have command of content during at least two hours of their evening viewing time. Mary was described by Mike and herself as seldom watching TV, unless accompanied by other activities, such as household chores or reading the paper. Mike finds it annoying when Mary is inattentive to the screen. He insisted he watches three times the content as his wife, but is affected by it less. He wants her to actively engage in a program, which he perceives to be a defense against any possible negative effects that TV viewing may yield.

Mary contended that the RCD had not affected her viewing habits to any great degree. She uses the remote to change channels in order to view programs she has preselected. More of a planned viewer, Mary usually knows what she wants to watch when she turns on the TV. She uses the channels listings guide more than her husband. She will occasionally 'graze' through the channels until she finds interesting content, but acknowledges it is usually a stalling tactic to avoid housework. Once she finds interesting content, she tends to stay with it.

Mike's "constant switching of channels" irritates Mary. She feels that she is not able to watch television and pre-recorded tapes without disturbance, because of Mike's use of the RCD. For the most part, he will let her watch her favorite shows without interruption, but if he feels she is not watching intently, he will flip through the channels. For Mary, the RCD is a convenient way to switch channels when a program of interest comes on another station. Unlike Mike, she seldom uses it to search out something to watch.

Suffice it to say that this difference between the spouses, both in styles of viewing and in their

perceptions of the impact of television, does generate conflict, with Mary joking that she "[doesn't] get to watch TV any more." She finds Mike's grazing to be annoying. If she picks the show, Mike always asks if he can check the sports scores. If they are actively engaged in one of their favorite programs, such as LA Law or Cheers, he uses the RCD only during commercials.

Jan's use of the RCD is an interesting balance between the way her parents use the device. Her skill at using the RCD comes from her father's overt instruction. She is aware of what all the buttons on the RCD do. As the observer noted,

> "When I asked her about the remote control device, she understood that it controlled the VCR, not the television. She understood that the VCR controlled the television. She explained that the RCD controlled the channels,...and she knew what all of the buttons on it did. At the bottom of the RCD were buttons that controlled setting the machine for recording when you are away from the home. She said she was not allowed to use these buttons. Only her father used these buttons."

Mike is very proud of his daughter's skill at manipulating the device, and encourages her to use it. She uses the RCD primarily when viewing pre-recorded material. Jan records her favorite cartoons while she is at school and views them when she gets home. She uses the RCD to fast-forward through the "words" (credits) as these have little meaning for her since she does not read. She also uses the device to fast-forward through "the boring parts" and to rewind the tape in order to watch her favorite segments over and over again. (While this activity pleases Mike, Mary finds it somewhat annoying, since she is generally in the room monitoring content.)

In the early stages of the interviews and observations, Jan used the RCD much like her mother. That is, she used it to switch channels to watch a specific program. Like Mary, she seldom grazed and watched only when she knew something was on that interested her. However, her mother reported later that Jan had started to use the RCD in ways more similar to her father. Much to Mary's consternation, Jan started to watch television more often, and to mimic Mike's habit of constantly flipping through the channels in an attempt to find something that interested her. Mary reported that, on occasion, Jan and Mike share the control of the RCD when they are both in the room viewing at the same time. They both encourage each other to flip through the channels, regardless of who is watching what.

What causes Mary the most concern is when Jan flips through the channels when Mary is trying to

watch a specific program. Jan's excuse for doing this is the same as Mike's: "You are not really watching it anyway." Mary may have more to worry about in the future. While Tim, at two, does not use the RCD, he understands its potential power with regard to televiewing. On one occasion, he grabbed what he thought to be the RCD and ran in front of the television pushing buttons in an attempt to change the channel. He understood the concept of the RCD, but had picked up a calculator mistaking its shape and buttons for the device.

Discussion

Taking the results of the survey interview and the in-home observations and depth interviews together, this study suggests that preschoolers have ready access to RCDs in their homes, and they are active users of the device. Furthermore, if they have access to the RCD, even young children will learn the device's basic functions. Preschool children are able to use the technology even at very young ages (three being the earliest in this study). Reading, time-telling, and counting skills are not necessary for using the device effectively. Also, gender and age did not emerge as important factors in influencing understanding or use of the RCD. Access appears to be the key to establishing a basic level of competence. Access goes hand-in-hand with parental encouragement to achieve technological knowledge/competence either explicitly or implicitly. In addition, the findings indicate that the RCD is considered a non-threatening tool, and parents do not feel the need to control its use in the same way that they perceive necessary with television. The device itself elicits little response from parents in terms of rules and limits.

Both the survey and the observations also suggest that preschoolers use the RCD keypad in very basic ways to control the television rather than the VCR, changing channels, lowering the volume, and so on. On several occasions, children were observed going to the front of the VCR to stop/start or to rewind tapes rather than using the RCD to do so. It may be that the simplicity of the front plates of VCRs appear less intimidating than the RCD for these functions. Thus, despite the fact that they have ready access to the RCD, they tend to use the device in very basic ways.

Preschoolers' RCD use patterns are related to, but not a direct imitation of, their parents' RCD use. That is, grazing parents do not necessarily guarantee grazing children, at least in children in this age group.

Child-specific content appears to have great appeal and is attended to from start to finish, in most cases. However, two factors appear to be directly related to the development of grazing behaviors. First, exposure to parents' and/or siblings' grazing habits and patterns appears to be related to the child's interest in grazing. Group viewing which includes different family members of different ages lends itself to the development of an interest in grazing in younger children. Second, when observation of parental or sibling grazing is coupled with overt instruction in how to use the RCD for grazing behaviors, direct modeling of the behaviors may begin to emerge, as we observed in the Roberts family. In this case the father served as a clear role model for the target child in determining how to integrate the RCD into her viewing style. The father's manipulation of the RCD was directly imitated by the target child, much to the mother's frustration. In addition, in the two homes where parents were more positive about commercial programming (the Jones and Roberts Families), group viewing was more common, with its inherent exposure to others' viewing styles and habits. In these homes the children exhibited higher levels of competence with, knowledge about, and interest in RCD technology.

Our analysis of family viewing styles suggests that children play an important role in shaping family viewing styles and practices, just as parents play an important role in shaping children's viewing. In all of the homes we observed, there were certain times of the day that were devoted exclusively to children's viewing. In one home this pattern was especially noteworthy because separate viewing styles and distinct uses of the RCD had been created around adult and child viewing which were completely segregated activities. When the children were present, the medium was totally dedicated to children's content, and no grazing behaviors were in evidence. However, after the children were put to bed, different content as well as different viewing styles and RCD uses appeared. In the other homes family viewing was the norm, but certain time periods were reserved for the children to assume control of the content and the technology. Parents were available for assistance, and mothers constantly monitored content, but manipulations of the RCD, as well as content selections, were determined by the children.

The emergence of distinct viewing periods and styles as a function of the absence or presence of children appears to be directly linked to changes in the viewing environment, specifically to the

introduction of RCD technology into the home viewing context. Previously viewing styles tended to be more static (staying tuned to a particular channel) than dynamic regardless of who was in the audience. However, the RCD offers the viewer enhanced control over content selections and facilitates dynamic viewing behaviors in the form of grazing. Clearly many adults enjoy the control and power the RCD offers. However, they exercise this power, for the most part, after the children go to bed. While the children are present, the dominant viewing style caters to their needs and interests; that is, viewing tends to focus on following one program from beginning to end. Children's "basic" uses of the RCD suggest that they do not yet enjoy or appreciate the full capability of the device. Only in one home where parental instruction in technology use was emphasized and enthusiastically reinforced by the father did the child appear to take advantage of and pleasure in the empowerment offered by the RCD.

Once the children have disappeared from the viewing environment, a different viewing style appears to dominate, one characterized by much higher levels of grazing behaviors. Also, perhaps, one more likely to fit Arrington's (1992) battleground description cited earlier. Our interviews with the parents suggested that it is when the parents view together that differences in RCD use and viewing styles become apparent. Fathers in these homes generally controlled the RCD more than mothers, and, therefore, controlled the programming more often than the mothers when the two viewed together. The mothers in our study consistently used the RCD in more purposive ways than did the fathers both for themselves and for their children. During the observations, only mothers ever consulted program guides. Fathers, on the other hand, tended to use the RCD to scan for interesting shows. However, despite the differences in RCD use and viewing styles between mothers and fathers, we encountered only minimal levels of tension over RCD control in the homes we observed.

It is clear from the observations and depth interviews that family viewing styles have been influenced, at least to some degree, by the introduction of the RCD. However, each family has integrated the device somewhat differently into their family viewing. These differences are especially compelling given the demographic similarities in these homes. Despite the homogeneity of the three homes we entered, we encountered three distinct viewing styles. For example, the "proper" location for the RCD was a clear

signal about the role of the device in family viewing and about who was "in charge" of content selections. In one case, possession and control of the RCD was retained by the parents, and content selections were controlled by the parents. In another home, the device "belonged" at the father's side and served as his "third arm." When he was at home, he controlled content selections, as well as the RCD. In the final home, the RCD was supposed to remain on a table but always ended up "lost." Such differences in responses to the RCD do not appear to be a function of the demographic characteristics of the home, nor of the characteristics of the technology itself, but rather of the unique dynamics of family relationships.

It is our contention that direct observations of RCD behaviors within the home context can inform traditional research with its reliance on self-reports of behaviors by adult audience members. The richness of the observational data on routine behaviors and family interactions add depth and dimension to our understanding of how families respond to new, empowering televisual technologies. The combination of depth interviews and direct observation extended the findings that emerged from the preschool survey interview. The purpose of multiple methods research is to triangulate, to seek structural corroboration in the findings by combining methods. Though the present study represents only a modest effort in introducing such an approach to the study of RCD behaviors and influences, relying on a small sample of preschoolers and only three homes, we hope that the model of incorporating complementary approaches to enhance researchers' understanding of RCD behaviors within the home context is one that will be deemed worthy of replication.

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